

Environmental Laboratory WALK-IN CHAMBER



The Walk-In Chamber is used primarily to test aircraft generators and constant speed drives to simulate flight conditions of temperature and altitude with conditioned air and drive capabilities.

Environmental Laboratory Walk-In Chamber

The Environmental Walk-In Chamber consists of an internal volume measuring 7'x7'x7' (343 cubic feet) that is integrated with a 300 horsepower 30,000 rpm drive stand. This drive stand, in conjunction with the Walk-In Chamber, simulates various electrical loads and temperature/altitude/humidity fluctuations that a generator/control unit would be exposed to when it is installed in a Navy aircraft deployed in the Fleet. This equipment provides the unique capability of testing aircraft generator/control units under various electrical load conditions. During this exposure, the unit is also subject to changes in temperature, altitude and/or humidity. Results from the testing indicated performance under real flight-time conditions.



Specifications

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| Temperature range: | -73 degrees Celsius to +120 degrees Celsius |
| Altitude range: | 0 feet to 100,000 feet 0 feet to 65,000 feet with full 40 lb/min |
| Conditioned air ranges: | 2.5 lb/min to 40 lb/min -70 degrees Celsius to +140 degrees Celsius |
| Drive Stand interface: | 300 horsepower motor from 0 rpm to 30,000 rpm |
| Projects supported: | Photos shows the testing of a TA-4J generator |

For more information on the Electrical Power Systems Division contact the Naval Air Warfare Center Aircraft Center, Patuxent River, MD 20670 at 301-342-0823.